

Freedom PRW	Designation	Wireless cradle	Capacity	Drive	L1	Weight
			N·m	N·m	mm	kg
113 38 0015	Freedom ^{4S} 15	197 13 0049: 15 N·m	1.5 - 15	9 x 12	364	1.0
113 38 0030	Freedom ^{4S} 30	197 13 0049: 30 N·m	3 - 30	9 x 12	364	1.0
113 38 0050	Freedom ^{4S} 50	197 13 0049: 50 N·m	5 - 50	9 x 12	364	1.0
113 38 0070	Freedom ^{4S} 70	197 13 0050: 70 N·m	7 - 70	9 x 12	470.5	1.0
113 38 0100	Freedom ^{4S} 100	197 13 0050: 100 N·m	10 - 100	9 x 12	470.5	1.0
113 38 0200	Freedom ^{4S} 200	197 13 0051: 200 N·m	20 - 200	14 x 18	604.5	1.2
113 38 0300	Freedom ^{4S} 300	197 13 0052: 300 N·m	30 - 300	14 x 18	754.5	1.2
113 38 0400	Freedom ^{4S} 400	197 13 0053: 400 N·m	40 - 400	14 x 18	854.5	1.4
113 38 0600	Freedom ^{4S} 600	197 13 0054: 600 N·m	60 - 600	14 x 18	1034.5	1.4

Wireless cradle



Part Number	Designation
197 14 0038	Option tool recognition for wrenches with 9x12 drive
197 14 0039	Option tool recognition for wrenches with 14x18 drive
333 51 0017	Direct battery charger to connect with your USB cable
197 14 0046	1D Barcode reader integrated
197 14 0044	2D Barcode reader integrated
197 14 0029	External battery charger
197 14 0040	Programming unit for recognition end fitting
323 19 0105	Rubber protection
313 11 0177	Rubber and display protection (only for Freedom ^{4S})
323 19 0012	Display protection (only for Freedom ^{4S})



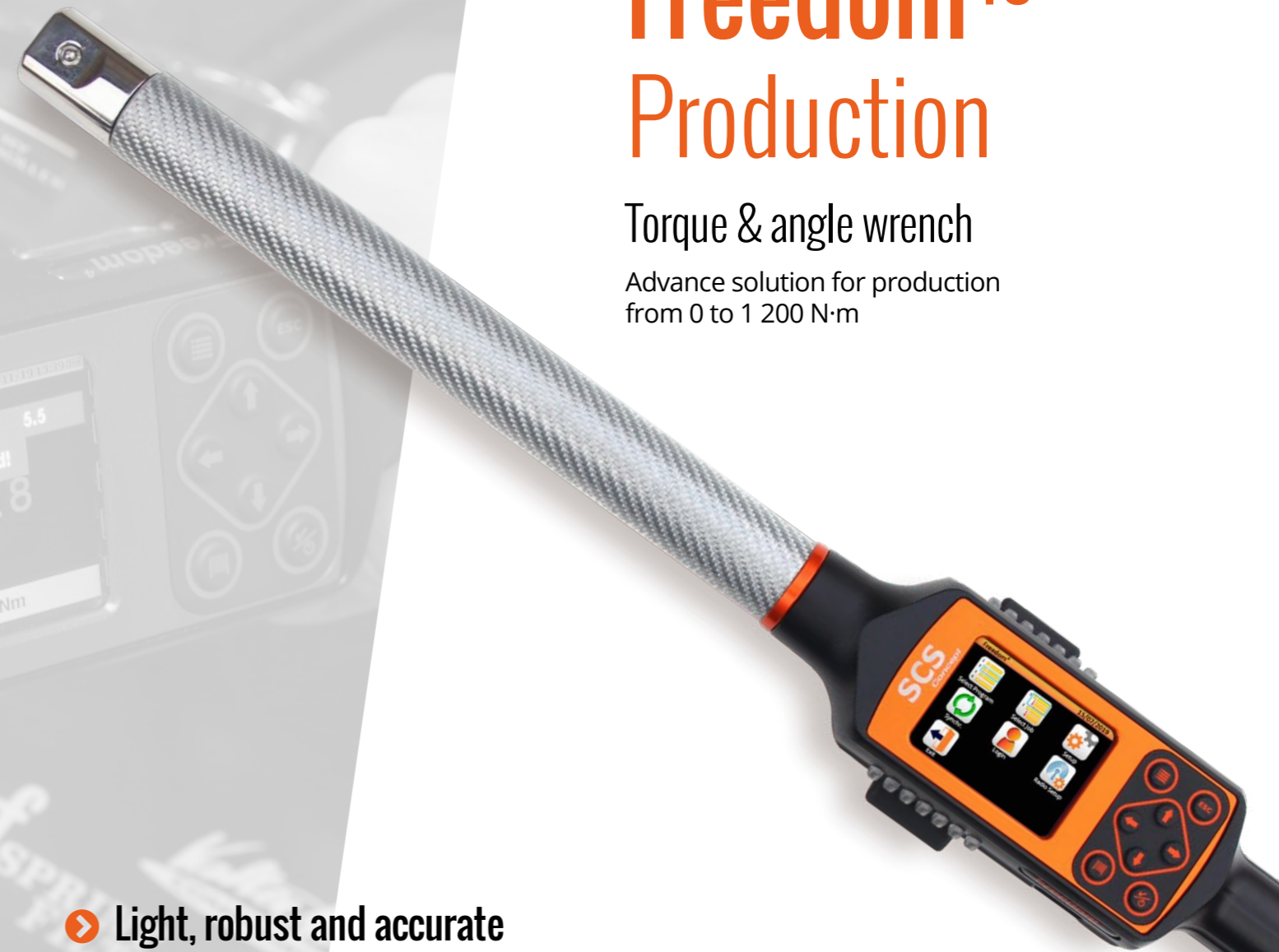
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Freedom^{4S} Production - Ed. 1 - EN

Freedom^{4S} Production

Torque & angle wrench

Advance solution for production
from 0 to 1 200 N·m



- Light, robust and accurate
- Automatic obstacle detection & incorrect hand position
- Wireless communication for data traceability
- End-fitting recognition
- High memory capacity

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Freedom^{4S} Production



- Standard end-fitting end fitting recognition



- Rubber protection
(PRW wrench is delivered with rubber protection wireless radio wings)



• Part number: 313 11 0177

PRW Production

- ✓ Production tightening
- ✓ Wireless management
- ✓ Data traceability
- ✓ Barcode reader/VIN management
- ✓ LAB functionalities

LAB Laboratory

- ✓ Joint analysis
- ✓ Prototype
- ✓ Material studies
- ✓ Pre-series
- ✓ Onboard results analysis
- ✓ Onboard traces
- ✓ Results and traces analysis on PC with Explorer software

Features

- Autonomy : up to 8 hours
- Torque accuracy : 0.5% of the read value
- Torque range : 10 to 100%
- Angle accuracy : +/-1° over 360°
- Memory 16 GB: >50 000 operations, traces and results
- Wireless communication WIFI/Bt
- WIFI 802.11 a/b/g/n
- Bluetooth V2
- Full security management
- WEP, WPA, WPA 2, EAP-TLS, LEAP, PEAP
- PRW functionalities
- LAB functionalities
- Untightening detection

Tightening strategy

- Fastening torque driven
- Fastening torque/angle
- Fastening yield
- Fastening yield/angle
- Prevailing torque

- Quick change wireless communication (WIFI/bt)
- Carbon extension
- USB connection for data traceability
- Large screen, 7 LEDs, vibration and buzzer to communicate with the operator
- Wireless charger
- Barcode reader in option
- Self diagnostic





➤ Hand position detection to ensure correct operation

➤ Guidance solution

A large color touch screen help the operator during the assembly process.



➤ Obstacle detection “patented” eliminate damage of your parts and protect your wrench

➤ Compatible with FIM-EVO



Manage up to 12 assembly tools and 6 stations
Fieldbus compatibility and data traceability
Webserver application.

➤ Accurate VDI/VDE 2645-2:2014

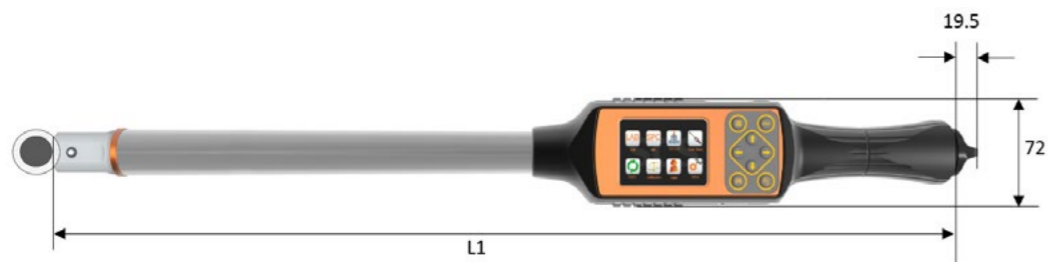
➤ Wireless communication

➤ Open protocol

➤ VW-XML protocol

➤ End fitting recognition to manage your assembly process

➤ Flexibility with more than 50 000 operations



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- Memory 16 GB: >50 000 operations, traces and results
- Full quality control strategy following VDI/VDE 2645-3:2019
- SPC functionalities
- LAB functionalities



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Freedom⁴ Quality - Ed. 1 - EN

- Light, robust and accurate
- Automatic obstacle detection & incorrect hand position
- Full quality check strategy
- Self diagnostic solution
- High memory capacity

Freedom⁴ Quality

Torque & angle wrench

Advance solution for quality
from 0 to 1 200 N·m

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Freedom⁴ Quality Solution



Freedom⁴ fulfil the evaluation methods conforming to VDI/VDE 2645-3:2019

- Peak value measurement
- Torque at angle of rotation
- Minimum after breakaway
- Intersection determination
- Gradient change

LAB

Laboratory

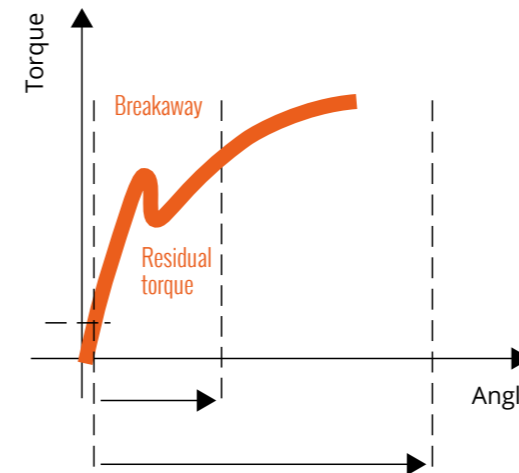
- ✓ Joint analysis
- ✓ Prototype
- ✓ Material studies
- ✓ Pre-series
- ✓ Onboard results analysis
- ✓ Onboard traces
- ✓ Results and traces analysis on PC with Explorer software

SPC

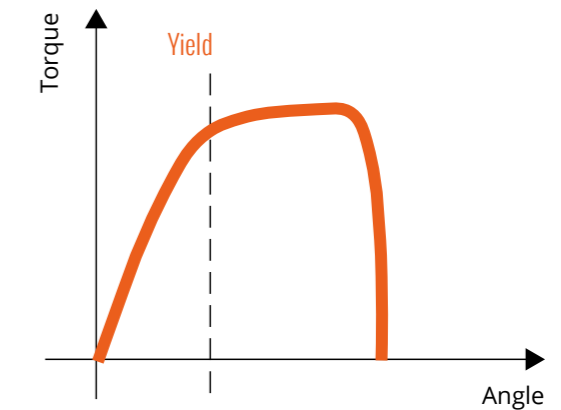
Quality control

- ✓ Residual torque check on a production line
- ✓ Route and job management via software (SQnet+ or QS torque)
- ✓ Onboard results analysis
- ✓ Data traceability
- ✓ VIN management
- ✓ Onboard traces
- ✓ Results, traces and statistic analysis on PC with SQNET + software

Smart breakaway



Joint analysis



Quality strategy

- Smart breakaway
- Breakaway peak
- Breakaway angle
- Loosen/tighten
- Minimum torque
- Loose torque
- Intersection determination

Route management

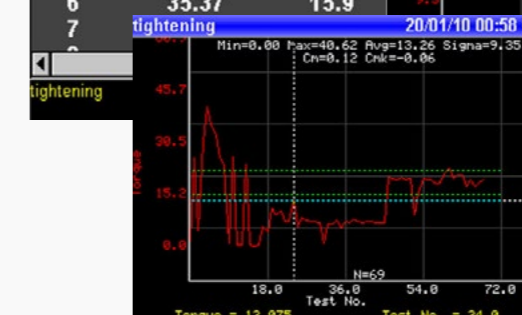


Statistic

Cm / Cmk e X/R charts

Cm/Cmk

No.	Torque	Angle	M
1	1.44	10.7	
2	25.74	4.8	
3	4.47	22.7	
4	30.49	12.4	
5	40.62	10.4	
6	35.37	15.9	
7			



T/A curve

X/R chart

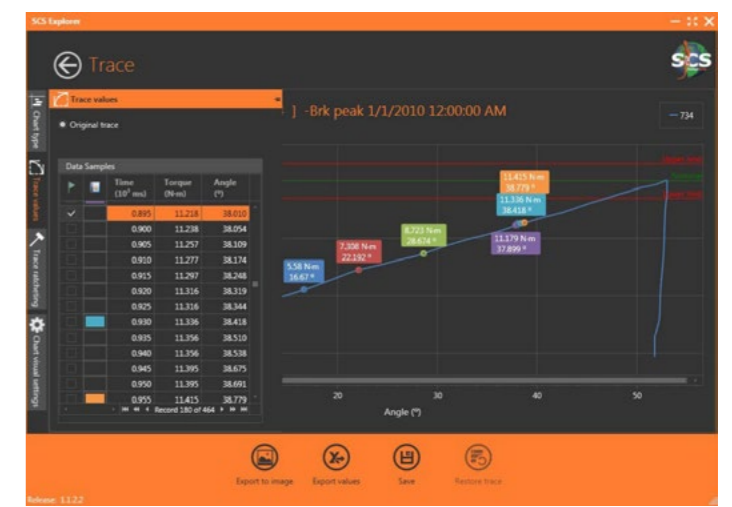


➤ Hand position detection to ensure correct operation

➤ Full quality control strategy following VDI/VDE 2645-3:2019

➤ **SCS Explorer**

- Test definitions
- Instrument programming
- Results & trace download
- Trace comparison
- Analytic function to find the right residual torque strategy



• Part number: 102 11 0025

➤ **Quality process manager for production line**

- Data collection
- Operation management
- Statistic analysis
- Process control management
- SPC management
- Route definition



➤ **Obstacle detection “patented”** eliminate damage of your parts and protect your wrench